CHAPTER 7

NAVIGATION

Lake Okeechobee, the Okeechobee Waterway, and the Kissimmee River have undergone a century of development for drainage, flood control, water supply, and navigation. Construction has been accomplished by both private individuals and public agencies. The development phases of the Federal Project are described in more detail in the USACE's Lake Okeechobee & Okeechobee Waterway Master Plan (1986) and Environmental Restoration of the Kissimmee River: Feasibility Report and Environmental Impact Statement (1991).

The development of the Okeechobee Waterway began in the 1800s with dredging that opened 360 contiguous miles of navigable waterway connecting the Caloosahatchee River, Lake Okeechobee, and the Kissimmee River. Dredging of the St. Lucie River began in the early 1900s, connecting the lake with the Atlantic Ocean. In 1930, the Federal Government adopted the Okeechobee Waterway as a federal navigation project with due consideration to be given to flood control (USACE 1986). The navigation channel has an authorized project depth of 8 ft. based upon a Lake Okeechobee stage of 12.56 ft. NGVD. The Kissimmee River has an authorized navigation project depth of 3 ft. at ordinary stage of the river (USACE 1991).

In addition to the federal navigation project, there are about 31 miles of historic boat trails in the marsh zone of Lake Okeechobee. These trails were in existence before the Hoover Dike was constructed and have been used primarily for recreational fishing. Because construction of the Dike impacted these trails, the USACE is responsible for maintaining these boat trails.

The following provides a summary of major challenge and strategy derived from the materials contained within this chapter.

Challenge: Public access to the lake needs to be increased in order to enhance recreational uses including fishing, boating, and wildlife observation .

Strategy: Support the Lake Okeechobee Scenic Trail development, and continue working with ecotourism groups.

A. GOALS, OBJECTIVES AND STRATEGIES

Goal 1: Maintain navigability for commercial and recreational uses within Lake Okeechobee and the Lake Okeechobee Waterway.

Objective 1: Provide assistance to maintain navigation within the federally operated navigation project encompassed by Lake Okeechobee and the Okeechobee Waterway.

Strategy 1: Consistent with water supply and environmental objectives, maintain water storage in Lake Okeechobee to ensure reasonable access to marinas and commercial and recreational channels.

Strategy 2: Control aquatic weeds on the Okeechobee Waterway and on the recreational boat trail system, to levels that do not unreasonably impede recreational access consistent with the approved Lake Okeechobee Aquatic Plant Management Plan.

Strategy 3: Maintain designated navigation locks and structures for the federal navigation project.

Strategy 4: Support USACE efforts to maintain and enhance navigation within the Okeechobee Waterway.

Goal 2: Maintain navigability for recreational uses within the Kissimmee River.

Objective 1: Provide assistance to maintain recreational navigation within the Kissimmee River.

Strategy 1: Support USACE efforts to maintain recreational navigation within the Kissimmee River consistent with the restoration program.

Strategy 2: Control aquatic weeds on the Kissimmee River, to levels that do not unreasonably impede recreational access consistent with the approved Kissimmee River Aquatic Plant Management Plan.

B. NAVIGATION LOCK STRUCTURES

Navigation lock structures on Lake Okeechobee, the Okeechobee Waterway, and the Kissimmee River are managed by the USACE or the SFWMD (Table 16). The USACE maintains five navigation boat locks on the Okeechobee Waterway. Boaters on the Okeechobee Waterway may take two distinct routes across Lake Okeechobee from the Port Mayaca Lock to the Moore Haven Lock. One is a 39-mile long open water crossing while the other, known as the Rim Canal, follows 50 miles along the southern shore.

All locks, other than those located in the Okeechobee Waterway, have been turned over to the SFWMD for operation and maintenance. This leaves the Franklin, Ortona, Moore Haven, Port Mayaca and St. Lucie locks under the jurisdiction and regular operation and maintenance of the USACE. In the event of a hurricane, jurisdiction of all locks on Lake Okeechobee reverts to the USACE.

Table 16. Navigation Lock Structures on the Federal Project.

Lock	Managing Agency		Width/ Length (ft.)	Hours
St. Lucie Lock (S-80)	USACE	St. Lucie Canal	50/250	6AM-10PM
Port Mayaca Lock (S-308B)	USACE	St. Lucie Canal/ Lake Okeechobee	56/400	6AM-10PM
Clewiston Lock (S-310)	SFWMD	Lake Okeechobee	50/60	5:30AM-8PM*
Moore Haven Lock (S-77)	USACE	Caloosahatchee/ Lake Okeechobee	50/250	6AM-10PM
Fisheating Creek Lock (S-131)	SFWMD	Lake Okeechobee	15/50	5:30AM-8PM*
Buckhead Ridge Lock (S-127)	SFWMD	Lake Okeechobee	15/50	5:30AM-8PM*
Taylor Creek Lock (S-193)	SFWMD	Lake Okeechobee	50/60	5:30AM-8PM*
Henry Creek Lock (G-36)	SFWMD	Lake Okeechobee	15/50	5:30AM-8PM*
Chancey Bay Lock (S-135)	SFWMD	Lake Okeechobee	15/50	5:30AM-8PM*
Ortona Lock (S-78)	USACE	Caloosahatchee	50/250	6AM-10PM
W.P. Franklin Lock (S-79)	USACE	Caloosahatchee	56/400	6AM-10PM
S-61	SFWMD	Kissimmee River	30/90	7AM-6PM**
S-65	SFWMD	Kissimmee River	30/90	7AM-6PM**
S-65A	SFWMD	Kissimmee River	30/90	8AM-5PM**
S-65B	SFWMD	Kissimmee River	30/90	8AM-5PM**
S-65C	SFWMD	Kissimmee River	30/90	8AM-5PM**
S-65D	SFWMD	Kissimmee River	30/90	8AM-5PM**
S-65E	SFWMD	Kissimmee River	30/90	7AM-6PM**

* Open until 9:00 PM from May 1 to September 30.
** Weekend hours for all Kissimmee River locks: March 1-October 31, 5:30AM-7:30PM; November 1-February 28, 5:30AM-6:30PM.
Source: USACE, 1986 and SFWMD Contract #C-4209, August 17, 1993.

C. SUMMARY OF NAVIGATION ISSUES

C1. Lake Okeechobee and the Okeechobee Waterway

Boating access to Lake Okeechobee is affected by water levels. At lake stages below 12.56 ft., the authorized project depth cannot be maintained. During periods of low lake level, navigational access to much of the fishing area is reduced. Conservation measures may be imposed which restrict discharges from the lake; these may include limitations by the USACE on the frequency of lockage operation. Water storage in Lake Okeechobee is currently being evaluated for multiple

purposes in three closely coordinated studies which include analyses of different lake regulation schedules (see Chapter 5). These studies are the Lake Okeechobee Regulation Study by the USACE and SFWMD, the Lower East Coast Regional Water Supply Plan by the SFWMD, and the Central and Southern Florida Project Comprehensive Review Study by the USACE and SFWMD. Any proposed schedule changes from these studies will have to address navigation impacts. The USACE is the lead agency in assuring and maintaining navigability in the lake.

In addition to the issues of adequate depth and unimpaired structural operations, travel impediment due to aquatic weed infestations is also an issue. This is of concern both within the Okeechobee Waterway and within the numerous boat trails and Rim Canal where recreational uses might be adversely impacted. The Rim Canal and boat trails also become inaccessible during low water periods. The SFWMD, through a cooperative agreement with the USACE, administers an Aquatic Weed Control Program. The Aquatic Weed Control Program is discussed in Chapter 4.

The USACE maintains historic boat trails to provide safe harbor for recreational boaters during inclement weather. Numerous unplanned recreational boat trails have developed and been maintained by continual boat use. No one is responsible for maintaining these boat trails.

The Okeechobee Waterway has had an authorized federal navigation depth of 8 ft. since the 1930s. In the 1960s, the Caloosahatchee River (C-43) and St. Lucie River (C-44) were widened and deepened as part of the Central and Southern Florida Flood Control Project (C&SF Project) to accommodate flood releases from Lake Okeechobee. The authorized flood control channel depth of 26 ft. is greater than the navigation channel depth the USACE is required to maintain. Therefore, there has been no need to dredge the Okeechobee Waterway for navigation, except for in the St. Lucie inlet area, where the Okeechobee Waterway intersects with the Intracoastal Waterway. Except for the St. Lucie inlet area, the Okeechobee Waterway has not been dredged for navigation since it was widened and deepened in the 1960s as part of the C&SF Project. Navigational dredging of the St. Lucie River downstream of S-80 is the responsibility of the Florida Inland Navigation District. The St. Lucie inlet area was last dredged in 1980, and the area is in need of dredging again. Overall, dredging is performed on an as-needed basis.

C2. Kissimmee River

The Kissimmee River (C-38) has had an authorized navigation depth of 3 ft. since 1902. However, because the C&SF Project later channelized the river into a 30-foot deep canal for flood protection, the actual channel depth is greater than the authorized channel depth the USACE is required to maintain. Presently, the size of the navigation locks, which provide a minimum depth of 5 ft., limit the size of boats in the C-38 Canal (USACE, 1991). In addition, there are five bridges crossing the Kissimmee River, with vertical clearances ranging from 12 to 20 ft., this may restrict the height of boats.

Channelization of the Kissimmee River resulted in destruction of wetlands and other riverine habitats. As a result, exhaustive research has been aimed at finding the best way to reverse the environmental damage and restore the river and floodplain ecosystem, while continuing to provide flood protection and navigation. In 1992, the USACE and SFWMD agreed to a plan that includes

backfilling 22 miles of the channel and removing the S-65B and S-65C locks. After the Kissimmee River Restoration Project is completed, the restored river will meet the authorized navigation depth of 3 ft. during normal flow conditions. The restored river will restrict navigation by vessels, which require drafts greater than 3 ft. year-round.